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MINOR COMMUNICATIONS

MINOR STUDIES FROM THE PSYCHOLOGICAL LABORATORY OF VASSAR COLLEGE

V. THE EFFECT OF IMPERCEPTIBLE LINES ON THE JUDGMENT OF DISTANCE

By HELEN M. MANRO and M. F. WASHBURN

Experiments by Titchener and Pyle,¹ reported to a recent meeting of the American Philosophical Society showed, in opposition to those of Dunlap,² that imperceptible shadows so placed as to supply the end lines of the Müller-Lyer illusion did not affect the apparent length of the lines at the end of which they were situated. Below is stated the result of some experiments by a somewhat different method, bearing on the same point. They were suggested by the experiments on "subconscious" perception described in Sidis's *Psychology of Suggestion*, 167 ff.

The apparatus consisted of two cards, on each of which a horizontal line was drawn in ink. The lines were both 15 cm. long. At the ends of the one, two faint lines, 6 cm. long, extending outward at an angle, were drawn in lead-pencil; at the ends of the other, similar lines extending inward. That is, these lines were in the position of the end-lines in the Müller-Lyer illusion. The cards were then held together, the one above and a little to one side of the other, at such a distance from the observer that the pencil lines were just not visible. The observer was asked to judge which of the lines was the longer. According to Sidis, a letter or figure too far away to be read may be correctly guessed with the aid of subconscious powers of discrimination, and we wished to see whether in a large number of experiments under these conditions the line with the imperceptible out-going lines would be judged longer a greater number of times than the other. The results may be stated in a sentence. The tests were made on ten fairly practiced observers, no fewer than a hundred on each observer. The total number of experiments was 1,370, and in 700 of these the judgment was in accord with the Müller-Lyer illusion. In the case of only two of the observers did the proportion of judgments showing the illusion rise above one-half. In one of these cases, the total number of experiments was 210, and the number showing the illusion was 136. In the other, the total number was 200, and the number showing the illusion was 132. It seems improbable that the lines at the ends had any influence upon the judgments, except possibly in these two cases. Our results are thus in accord with those of Titchener and Pyle.

¹ This *Journal*, xviii, 388; *Proc. Amer. Philos. Soc.*, xlii, 1907, 94.

² *Psych. Rev.*, vii, 435.